



RCA Amateur Radio Club Indianapolis, IN

www.w9rca.org



JANUARY 2022

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE TUESDAY,
JANUARY 11th 6:30 PM AT NORTH SIDE EVENTS, IN THE GAME ROOM, FORMERLY THE
KNIGHTS OF COLUMBUS, 2100 EAST 71st, INDIANAPOLIS, IN

RCA ARC NEWS

DECEMBER MEETING SUMMARY – Thanks to all who attended the December meeting. Our insurance has been paid for another year as well as dues to the Indiana Repeater Council. Jim, K9RU, reported that we have loaned an unused circulator to the 146.70 repeater group to see if it solves an interference problem they are experiencing. There is no information as to whether there will be an Indy Hamfest in 2022 or not. Field Day results were published in the December issue of QST. The Indy United club didn't have the highest score but was very close. Our '88 repeater suffered about a week of down time as KF9UH was out of town and could not attend to it. The Hortonville repeater (146.865) is on the air. No interference has been reported although there hasn't been much activity on that repeater.

AMATEUR RADIO LICENSE TEST SESSION

Date: Saturday, January 8, 2022
Time: Starting at 12:00 pm **by appointment only.**
Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd
Indianapolis, IN 46254-2407
Required: FRN and completed form NCVEC 605.
Contact: Jim Rinehart, k9ru@arrl.net, 317 721-1458

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Jan. 16-18ARRL `January VHF Contest

An expanded, downloadable version of QST's [Contest Corral](#) is available as a PDF. Check the sponsors' website for information on operating time restrictions and other instructions.

SKYWARN SPOTTERS AND NETS TRACK DEADLY STORMS

Amateur Radio activity related to the deadly spate of tornados on December 10 in Kentucky, Tennessee, Mississippi, Arkansas, Missouri, and Illinois was largely associated with the National

Weather Service (NWS) SKYWARN program. Weather spotters, most of whom are radio amateurs, followed the progress of the storms, sharing that information with NWS offices and related partners.

SKYWARN groups across Arkansas followed the progress of the parent storm from the formation just northeast of Little Rock until it crossed the Mississippi River. According to Gary Gibbs, KE5HKW, SKYWARN Coordinator for Craighead County, Arkansas, Emergency Management, volunteers were very active in the Jonesboro area. This area includes Monette Arkansas, where the Monette Manor -- a long term care facility -- was destroyed. -- *Thanks to J.M. Rowe N5XFW, ARRL Arkansas Section Emergency Coordinator*

Similarly, SKYWARN teams out of NWS Memphis were all over this and there was a whole lot of traffic that crossed multiple states. Memphis NWS uses a linked amateur radio digital network (DMR talkgroup) for their consolidated storm-spotting efforts and it appeared to work very well, considering the extreme situation. -- *Thanks to Robert Hayes, KC5IMN, ARRL Mississippi Section Emergency Coordinator*

The Red Cross is reported to have set up portable cell phone towers in areas that don't have service because of damage to the telecommunications infrastructure.

OBSERVATIONS OF OVER-THE-HORIZON RADAR INTERFERENCE IN HAM BANDS TOP ALL OTHERS

The volume of reports of over-the-horizon (OTH) radar interference from observers working with the International Amateur Radio Union ([IARU](#)) Region 1 Monitoring System (IARUMS) dwarfs that of all other interference sources, the [November IARUMS newsletter](#) reports. Nearly 800 OTH radars were observed during November alone, and the total number of reports for the year is more than 4,500 -- although that number likely includes multiple reports of the same OTH radar systems.

While the intruder watcher is focused on IARU Region 1, much of the major interference it recounts can affect the amateur bands in the world's other two IARU regions. IARUMS has tracked most OTH radar signals to sites in Russia and China, but a [recent report](#) indicated that India has an OTH radar system in the works. IARUMS is calling the system "of concern," although it's not known what frequencies it may use.

During November 17 - 21, IARUMS reported a "strange, somewhat washed-out signal" on the order of 7 kHz wide, that "drifted slowly back and forth" in 40 meters and below. Read [an expanded version](#). --ARRL Letter

NEW LOW-POWER LIMIT FOR ARRL HF CONTESTS STARTING JANUARY 1, 2022

Effective January 1, 2022, the power output limit for low-power categories has been lowered from 150 watts PEP to 100 W PEP. With the exception of ARRL Field Day, this change is in effect for all ARRL- sponsored HF contests as well as the IARU World HF Championship.

This change has been implemented to standardize the low-power categories in the contesting community. Additionally, the previous 150 W limit is no longer applicable to low power contest categories because most modern HF transceivers only have a power output of 100 W or less. --ARRL Letter

ARRL SEEKS INPUT FROM VHF CONTEST PARTICIPANTS

Through the ongoing work of ARRL's Contest Advisory Committee (with input from their Ad Hoc VHF Subcommittee), a survey has been sent to recent participants in ARRL's January, June, and

September VHF Contests. The objective of the survey is to better understand participation in ARRL VHF Contests, in particular how digital modes contribute to the ARRL VHF Contest Program.

VHF contest participants from 2020 and 2021 events were sent invitations to participate in the survey to the email address supplied upon entry. If you wish to participate in the survey, but have not received an invitation, we are seeking your input until December 28, 2021.

Follow the link at surveymonkey.com/r/VHF-Contest-Survey-2021 to complete the survey. --ARRL

WSJT-X DEVELOPMENT TEAM RELEASES VERSION 2.5.3

The WSJT-X Development Team - Joe Taylor, K1JT; Steve Franke, K9AN; and Nico Palermo, IV3NWV - have announced the release of version 2.5.3. This new release includes a feature of special interest to users participating in the ARRL January VHF Contest (January 15-17, 2022).

The new feature for the ARRL VHF contests is an enhanced macro facility for Tx messages, aimed at making it easier to ask another station to QSY to a new band. The feature is described briefly in the User Guide at physics.princeton.edu/pulsar/K1JT/wsjitx-doc/wsjitx-main-2.5.3.html#TXMACROS

A download link has been posted on the WSJT-X web page at physics.princeton.edu/pulsar/k1jt/wsjitx.html. --ARRL

ARRL TO OPPOSE FOREST SERVICE ADMINISTRATIVE FEES FOR AMATEUR RADIO FACILITIES

The US Forest Service is proposing to implement a statutorily required annual fee for new and existing communications use authorizations to cover the costs of administering its authorization program. ARRL plans to vigorously oppose the imposition of the proposed fees on amateur radio.

The Forest Service proposal results from requirements set forth in the Agriculture Improvement Act of 2018 (aka "the Farm Bill"). Specifically, section 8705(c)(3)(b) of the Farm Bill directs the Forest Service to issue regulations that require fees for issuing communications use authorizations based on the cost to the Agency for maintenance or other activities to be performed by the Agency "as a result of the location or modification of a communications facility."

The Forest Service is responsible for managing Federal lands and authorizes the use and occupancy of National Forest System (NFS) lands for communications facilities that provide communications services for adjacent rural and urban communities. The Agency said in its proposal that it administers more than 3,700 special use authorizations on NFS lands for infrastructure that supports more than 10,000 wireless communications uses at 1,367 communications sites.

According to the Forest Service [Notice](#) published in the December 22, 2021 issue of the *Federal Register*, revenues from the proposed fee, "would provide the funds necessary to support a more modernized, efficient, and enhanced communications use program," and will "cover the costs of administering the Agency's communications use program." Costs, as laid out in section 8705(f)(4) of the Farm Bill, may include expenditures for such things as "on-site reviews of communications sites, developing communications site management plans, hiring and training personnel for the communications use program, conducting internal and external outreach for and national oversight of the communications use program, and obtaining or improving access to communications sites on NFS lands."

ARRL encourages amateur radio licensees to file comments opposing the imposition of the proposed administrative fee on amateur radio users. Comments must be received in writing by no later than February 22, 2022. Comments may be [submitted online](#) at the Federal Rulemaking

Portal or via USPS mail to Director, Lands & Realty Management Staff, 201 14th Street SW, Washington, DC 20250-1124, and must include the identifier "RIN 0596-AD44." --ARRL Letter

ARRL AND RSGB ANNOUNCE WINNERS OF TRANSATLANTIC CENTENARY CUPS

ARRL and the Radio Society of Great Britain ([RSGB](#)) have announced winners of the [160-Meter Transatlantic Centenary QSO Party](#). The December 12 on-air event commemorated the 100th anniversary of the successful Second Transatlantic Tests that contributed to the dawn of international amateur radio communication. Participating stations operating on CW attempted to contact the two official call signs: W1AW at the Hiram P. Maxim Memorial Station and GB2ZE, activated by a team of stations in Scotland. GB2ZE commemorates the call sign of Paul Godley, 2ZE, who was on the receiving end of the 1921 tests sent by ARRL to Scotland.

The [GMDX Group](#) of Scotland announced that it would award a *quaich* -- a traditional Scottish drinking cup representing friendship -- to the first stations in North America and the UK, including the Crown Dependencies, to complete contacts with both W1AW and GB2ZE during the QSO Party.

The cup winners are Rick Niswander, K7GM, and Bob Barden, MD0CCE. Logs from those taking part in the 6-hour event included 496 contacts, 261 from W1AW. Each participant that was recorded in the official W1AW and/or GB2ZE logs is eligible for a [commemorative certificate](#) designed by ARRL and RSGB. Participants do not have to submit their logs.

During the event, W1AW enjoyed a visit from Bruce Godley Littlefield, Paul Godley's grandson. Littlefield presented ARRL CEO David Minster, NA2AA, with a full-size, gallery-quality copy of the resolution awarded to his grandfather by ARRL, dated February 17, 1922.

"The large certificate was given to Godley for his historic achievement of engineering and operating the receiving system that was installed in Ardrossan, Scotland, where the first amateur signals were successfully heard from North America," explained ARRL Director of Operations Bob Naumann, W5OV. "On the journey to Scotland, Godley was coincidentally on the same ship with a brilliant young engineer named Harold Beverage. Beverage and Godley spoke during the journey, and Godley incorporated the Beverage antenna in his receiving system to great success. The chance meeting is but one piece of this wonderful story and historic achievement." Read [an expanded version](#).

PAST ARRL CHIEF DEVELOPMENT OFFICER MARY HOBART, K1MMH, SK

Retired ARRL Chief Development Officer Mary Hobart, K1MMH, of Ardmore, Pennsylvania, [died](#) on December 12. An ARRL member, she was 78.

From the time she arrived at ARRL Headquarters, Mary served enthusiastically as ARRL's Chief Development Officer, developing relationships that helped to grow the ARRL Endowment. One individual she invited into the ARRL fold of regular supporters was Joe Walsh, WB6ACU, of the Eagles.

Born in Washington, DC, she attended the National Cathedral School and Northwestern University in Chicago. After school, she moved to Philadelphia to raise her two sons as a single mother while working in non-profit development -- notably at the Philadelphia Zoo, WHYY, and NJN. She earned an MBA at LaSalle University in Philadelphia.

She relocated to New England to work in development at Connecticut Public Television (CPTV) and then at ARRL.

During her 13 years at ARRL Headquarters, she was behind the creation of The Diamond Club, The Diamond Terrace, The Maxim Society, and the [Second Century Campaign](#), among other initiatives. She served as secretary of the ARRL Foundation, and promoter of the ARRL Spectrum

Defense Fund.

"During Hurricane Katrina, she virtually single-handedly created the Ham Aid Program that provides new gear to amateurs who have lost their equipment in disasters," then-ARRL Chief Operating Officer Harold Kramer, WJ1B, said in the August 2014 issue of QST. "Because of her efforts and those of her staff, she has raised millions of dollars for ARRL and, ultimately, for the benefit of Amateur Radio."

She also was one of the founders of the successful [Teachers Institute for Wireless Technology](#). Funded by voluntary contributions, the annual summer workshops help to better acquaint classroom teachers and educators with wireless technology and the science behind it.

She retired from ARRL in 2014, moving back to the Philadelphia area to be closer to family. Read [an expanded version](#).

HAM RADIO UNIVERSITY GOING VIRTUAL AGAIN

With COVID-19 uncertainties precluding an in-person gathering for a second year, the 23rd annual Ham Radio University ([HRU](#)) educational conference will be held as a virtual event again this year, on Saturday, January 8, 1300 - 2000 UTC, as an online GoToWebinar videoconference.

Advance registration is required and begins on December 20.

HRU 2022 will be adding five forums this year, for a total of 19 presentations by experts in a broad range of amateur radio activities, including Amateur Radio Emergency Communications. Other topics are:

- Basics of HF Operating
- Ham Radio Contesting and DXing
- Communicating through Amateur Radio Earth Satellites
- Software-Defined Radios
- HF and VHF Digital Communications
- Parks on the Air
- SKYWARN
- Cables and Connectors
- Using Raspberry Pi Computers in Amateur Radio.

Online attendees will be able to ask questions of the presenters. Founded by Phil Lewis, N2MUN (SK), HRU also serves as the online convention of the ARRL NYC-Long Island Section.

As in past years, participation in HRU 2022 is free; an optional donation of \$5 is suggested. Additional information is online, including the schedule of forums and advance registration starting December 20. --ARRL

SPAIN, NORWAY SEEK WAYS TO ATTRACT A YOUNGER GENERATION OF HAMS

Spain's national amateur radio society, Union of Spanish Radio Amateurs ([URE](#)), is attempting to entice youth and youngsters to become interested in amateur radio. URE is offering free membership in the organization and a free amateur radio license manual. The organization has framed amateur radio as "the technological and experimental hobby that will hook you forever."

URE's pitch to the next generation of radio amateurs is that ham radio opens "a universe of

technology and operational challenges" that includes advanced digital modes, satellite and microwave communication, contesting, and experimentation, as well as "great opportunities to learn and make friends."

Prospective young radio amateurs must be between 14 and 18 years old to qualify for a free URE membership and a license manual to prepare for the exam and obtain an operator license. URE says the manual explains the basics of electricity, electronics, and telecommunications, as well as the regulatory structure.

Those aged under 25 can qualify for a half-price membership once they've obtained their radio amateur license and become full URE members.

Meanwhile, Norway is looking to introduce a new 10 W entry-level license that will enable 12- and 13-year-olds to get started building simple transmitters and receivers. The Research Council of Norway has granted 1 million kroner (approximately \$114,600) to support the Radio Communications Technology for Young People project, aimed at recruiting young radio amateurs.

Norway's national amateur radio organization, NRRL, said the program wants to leverage young peoples' "digital competence and understanding of digital technology." NRRL and the Norwegian Defence Research Establishment (FFI) are partnering in the project, headed by Torbjørn Skauli, LA4ZCA. The project aims to increase interest in technology and science in schools. The idea is to introduce amateur radio as a high school elective, as well as develop an entry-level certificate allowing 12- and 13-year-olds to get started with amateur radio.

The Norwegian Communications Authority (NKOM) has already laid out the requirements and conditions of the entry-level license. Skauli, a professor at FFI, has previous experience with computer coding workshops in schools. The proposal for an entry-level certificate has received broad support in education and public administration in Norway, according to the SSA (Sweden's national amateur radio organization), which says it's looking forward to cooperating with NRRL in this area. --ARRL Letter

NOVEMBER 2021 VOLUNTEER MONITOR PROGRAM REPORT

This is the November 2021 report of Volunteer Monitor (VM) Program activity. The VM program is a joint initiative between ARRL and the FCC to enhance compliance in the Amateur Radio Service.

- Operators in Ardmore, Tennessee; Lithonia, Georgia; Coconut Creek and Miramar, Florida, and East Bridgewater, Massachusetts, were issued *Advisory Notices* regarding excessive bandwidth, contrary to FCC rules. The operators were transmitting on SSB with bandwidths of 8 to 9 kHz.
- *Advisory Notices* were issued to operators in Northridge (Los Angeles) and Hemet, California, for interference to repeaters. Both operators had been requested by the repeater trustees to cease using the repeaters. The *Advisory Notice* issued to the Northridge operator cited broadcasting and failure to identify, and it informed them that the FCC was requested not to grant their upcoming renewal application unless the case was resolved.
- An *Advisory Notice* was issued to an operator in Powell, Wyoming, for transmitting overdriven FT8 signals that resulted in spurious emissions. The operator has since corrected the problem.
- General-class operators in Bartonville, Illinois, and St. Clair, Michigan, were issued *Advisory Notices* for operation in the Amateur Extra-class portion of 40 meters. A Technician-class licensee in Windber, Pennsylvania, was issued an *Advisory Notice* for operating in the General-class portion of 75 meters.
- One case was referred to the FCC for enforcement action and review of a license renewal application. The FCC referred two cases to the VM Program.

Totals for VM monitoring during October were 2,939 hours on HF frequencies, and 3,282 hours on VHF frequencies and above, for a total of 6,221 hours. That is the highest number of hours monitoring since the inception of the VM Program. -- *Thanks to Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH*

WORLD'S SMALLEST MOON LANDER FROM JAPAN WILL PUT HAM RADIO TRANSMITTER ON THE MOON

Japan's [OMOTENASHI](#), the world's smallest moon lander, will have an X-band and UHF communication system, although it will not carry an amateur band transponder. OMOTENASHI is a 6U CubeSat set for launch via a NASA SLS rocket as early as February 2022. It will have a mission period of from 4 to 5 days. The name is an acronym for Outstanding Moon Exploration Technologies demonstrated by Nano

Semi-Hard Impactor. Wataru Torii of the Japan Aerospace Exploration Agency (JAXA) Ham Radio Club, JQ1ZVI, said radio amateurs can play a role in gathering data from the spacecraft.

The spacecraft is made up of two separable components, both having independent communication systems -- an orbiting module and a surface probe. The orbiting module will take the surface probe to the moon. It will transmit beacon or digital telemetry data on UHF (437.31 MHz). The surface probe -- the moon lander -- will transmit digital telemetry or three-axis acceleration analog-wave with FM modulation on UHF (437.41 MHz). Transmitter power will be 1 W in both cases.

"If we succeed in receiving the UHF signal from the surface probe, we could know the acceleration data on the impact on the moon and the success of the landing sequence," Torii explained.

"We already have a station for uplink and downlink at Wakayama in Japan -- used as an EME [moonbounce] station. However, if the satellite is invisible from Japan, we cannot receive the downlink signal. So, we need a lot of help from ham radio stations worldwide."

The orbiting module beacon will transmit on 437.31 MHz using PSK31. The surface probe beacon will transmit on 437.41 MHz using FM, PSK31, and PCM-PSK/PM.

[Contact](#) Torii for more information. --ARRL

ARDC GRANT WILL EXPAND RMHAM'S 5 GHZ MICROWAVE NETWORK IN THE ROCKIES

A grant of \$374,233 from Amateur Radio Digital Communications (ARDC) to Rocky Mountain Ham Radio ([RMHAM](#)) will go toward expanding a multistate 5 GHz microwave network and help to outfit communications trailers.

The microwave network enables partnering amateur radio clubs and groups to access, enable, or expand their repeater and other FCC Part 97-appropriate applications. The network provides 50 - 100+ Mbps of bandwidth and is managed and monitored by a dedicated network operations team.

In Colorado, RMHAM will be able to grow its microwave network by 23 new microwave sites and 20 new point-to-point spans to expand IP connectivity and future repeater coverage across the western slope of Colorado and along the I-70 and I-76 corridors in eastern Colorado.

In New Mexico, RMHAM will grow its microwave network by 16 sites and 15 new point-to-point spans to expand IP connectivity and future repeater coverage south from Albuquerque to El Paso, Texas; along US Route 550 to Durango, Colorado, and across the Rio Grande Valley to Alamogordo, New Mexico. The club will also expand RMHAM digital repeater coverage (DMR or

D-STAR, depending on coverage gaps) across New Mexico through the addition of seven repeaters co-located at their proposed new microwave sites.

As a result of the grant, RMHAM will also be able to upgrade its Colorado communications trailer, which offers both RF and IP connectivity, and to outfit a new trailer for service in New Mexico.

REVERSE BEACON NETWORK UPDATE

Pete, N4ZR, has announced that the [Reverse Beacon Network](#) (RBN) team is planning to release a new version of the pattern file that Skimmer Server uses to validate call signs that it copies to be as up to date as possible by the time of the ARRL CW DX Contest.

Why is this important? Depending on how familiar the pattern of the call sign is, Skimsvr will require fewer or more repetitions before it recognizes it as a valid call sign. With the proliferation of single-letter suffixes in contest calls, the system needs to be kept as up-to-date as possible.

If you are aware of a callsign pattern that is not in the current list, please drop Pete a note and let him know. If you're anticipating a change, such as a new set of single-letter suffixes or a new alternate prefix (like VL plus single-letter suffixes in VK, for example), we want to make sure it is included, but not unless it will be in effect before February of next year, and only if you have authoritative information.

Send an email to Pete at pete.n4zr@gmail.com with as much detail as you can, if you have any changes that need to be made.

SHORTS

According to a [tweet](#) from ICOM Japan, the company is developing amateur radio equipment for the 2.4 and 5 GHz bands, under the theme of "ICOM SHF Project-Challenge."

[How Amateur Radio Fanatics Launched the World's First Private Communication Satellite](#) / Inverse, New York (December 12, 2021).

The Hungarian Amateur Radio Association ([MRASZ](#)) has announced a program to lease radio equipment to beginning amateurs who cannot afford it. The loan period can be up to 2 and a half years. To be eligible, young operators must be MRASZ members, hold a valid license, and be able to install antennas. Supported applicants are expected to participate in club events and contests, and also report on their activities. -- *Thanks to IRTS*

The WRTC 2022 Committee has announced a first time ever award, promoting World Radiosport Team Championship 2022. Starting on January 1 and concluding July 10, 2022, over 100 Italian operators will activate special WRTC callsigns, one for each Italian call area. These special WRTC callsigns will also be active during some contests, concluding with the 2022 [IARU HF World Championship](#).

Each participant's QSO totals and award hunter scores will be displayed on a real-time leaderboard at www.wrtc2022.it/award. Each participant will be able to download the award in digital format at the end of the event. Read the full rules at www.wrtc2022.it/award.

Radio-Jupiter Central --Jupiter is a wonderful object for radio study. It is somewhat predictable and yet often surprising in its violent outbursts below 40 MHz. You can receive Jupiter using relatively simple equipment or you can construct complex spectrograph receivers and build monstrous antenna arrays to capture its more subtle messages. The complex relationship between the gas giant planet and its volcanic moon Io is not completely understood, but we do know these bodies work together to produce "radio noise storms" as they pirouette through space. Many factors come into play for the amateur radio astronomer who tries to capture a noise storm. In order maximize your chances of success, you should take time to understand the potential hurdles and optimize your equipment for this task. <http://radiosky.com/rjcentral.html>

THANKS FOR READING *HAPPY NEW YEAR!*

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